

CLAIMS

I claim:

- 1 1. An immunodeficient mouse comprising:
 - 2 a) human T lymphocytes expressing the CD45 antigen, wherein at least 5% of the
 - 3 human T cells expressing the CD45 antigen represent immature naive T lymphocytes; and
 - 4 b) human tumor cells;
- 5 wherein said immunodeficient mouse is a SCID/beige mouse.
- 1 2. The mouse according to claim 1, wherein said tumor cells are from a tumor cell
- 2 line.
- 1 3. The mouse according to claim 1, wherein said tumor cells are from a primary tumor.
- 1 4. The mouse according to claim 1, wherein said tumor cells are derived from central
- 2 nervous system cells.
- 1 5. The mouse according to claim 4, wherein said tumor cells derived from central
- 2 nervous system cells are glioblastoma cells.
- 1 6. The mouse according to claim 1, wherein at least one of said tumor cells contains
- 2 at least one transgene.
- 1 7. The mouse according to claim 6, wherein at least one of said transgenes is a human
- 2 immunomodulator gene.

1 8. The mouse according to claim 6, wherein at least one of said transgenes is delivered
2 by a viral vector.

1 9. The mouse according to claim 1, further comprising an immunogen.

1 10. The mouse according to claim 9, wherein said immunogen is a vaccine.

1 11. A tumor cell vaccine comprising a tumor cell expressing B7-2 and at least one
2 additional immune modulator.

1 12. The vaccine according to claim 11, wherein said at least one additional immune
2 modulator is a cytokine.

1 13. The vaccine according to claim 12, wherein said cytokine is selected from the
2 group consisting of interleukin 2, interleukin 4, interleukin 6, interleukin 7, interleukin 12,
3 granulocyte-macrophage colony stimulating factor, granulocyte colony stimulating factor,
4 interferon-gamma, tumor necrosis factor-alpha.

1 14. A method of treating a tumor comprising:

2 a) providing:

3 i) a subject having a tumor of the central nervous system;

4 ii) an expression vector encoding the human B7-2 protein and at

5 least one additional immune modulator;

6 b) transferring said expression vector into said tumor under conditions

7 such that said B7-2 protein and said immune-modulator are expressed by at least a
8 portion of said tumor.

1 15. The method according to claim 14 further comprising, prior to transfer of said
2 expression vector, the step of removing at least a portion of said tumor from said subject and
3 following said transfer of said expression vector, irradiating said tumor cells expressing said
4 B7-2 protein and said immune-modulator and introducing said irradiated tumor cells back
5 into said subject to create an immunized subject.

1 16. The method according to claim 15 further comprising, introducing at least one
2 additional dose of irradiated tumor cells expressing said B7-2 protein and said immune-modulator
3 into said immunized subject.

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